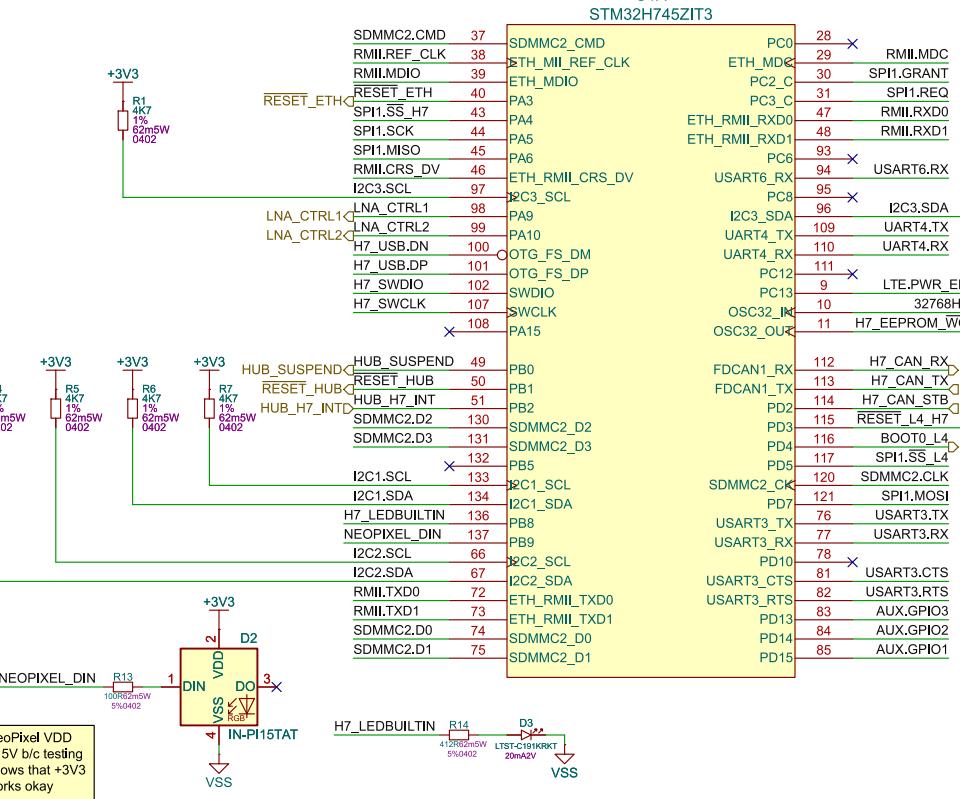


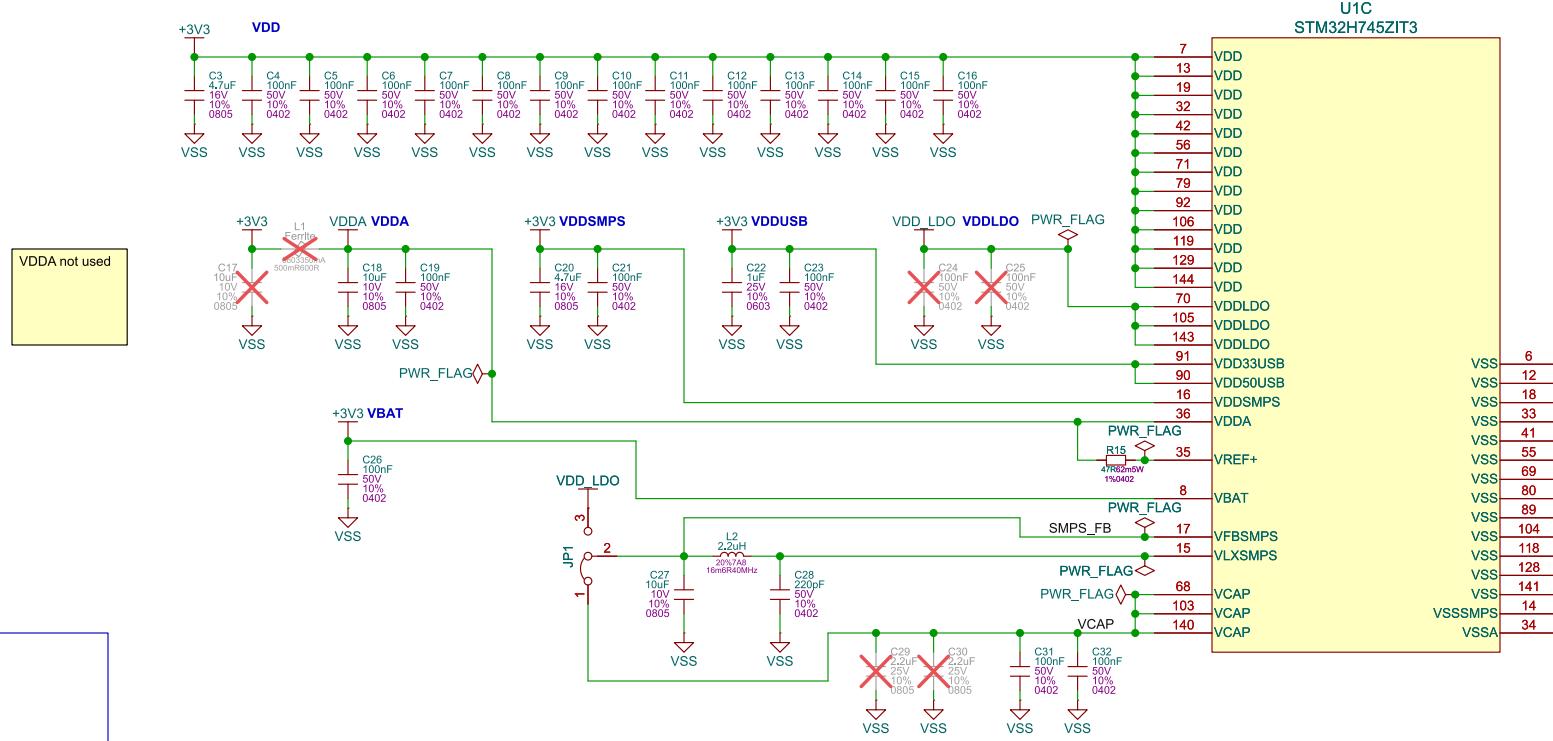
STM32H745 GPIO

A



STM32H745 Power Supplies

C



Power Supply Configuration

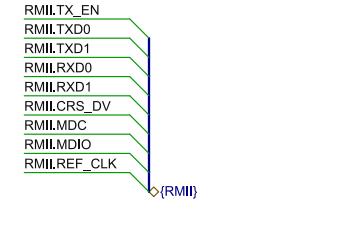
SMPS: Default

SMPS+LDO:

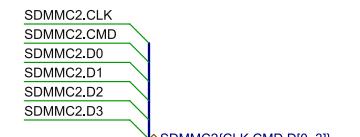
- Disconnect SMPS_FB from VCAP
- Connect SMPS to VDD_LDO
- Add 2x100nF near VDD_LDO
- Add 2x2.2uF near VCAP
- Remove 2x100nF near VCAP

Net Busses

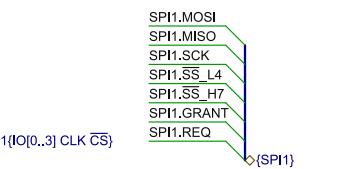
Ethernet (TCP/IP)



SD Connector



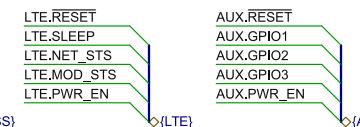
QSPI Flash



Upstream USB FS



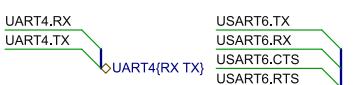
M.2 GPIO



I2C Busses



UART/USART Busses



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Status PROTOTYPE

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Title: Awohali - STM32H745



Size: B | Sheet: /STM32H745/ | Revision: 1

Date: 2025-05-13 | Sheet 2 of 16

File: stm32h745.kicad_sch | Drawn By: Madison Gleydura

1

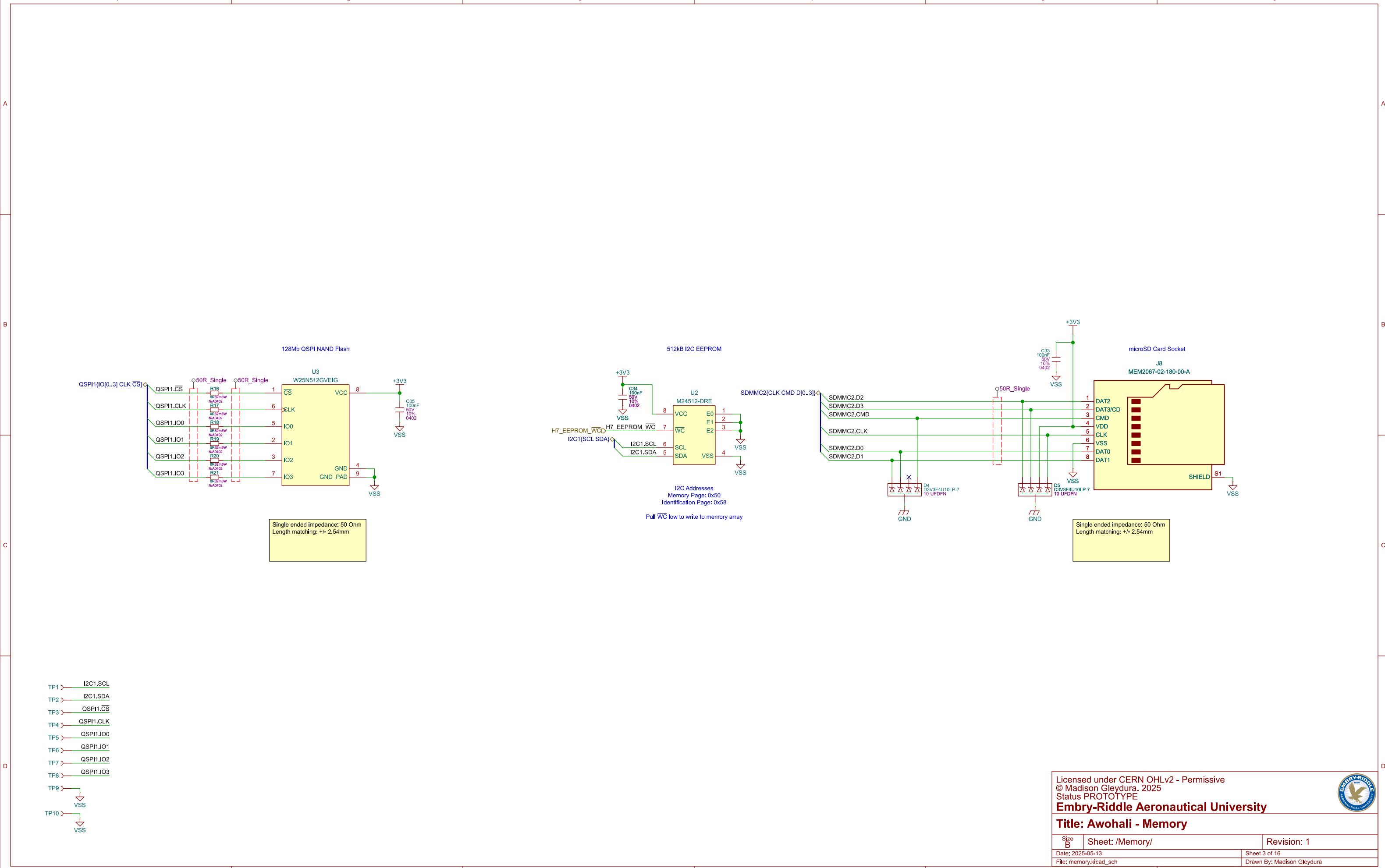
2

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6



A

A

B

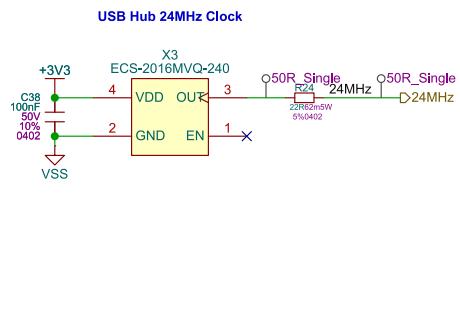
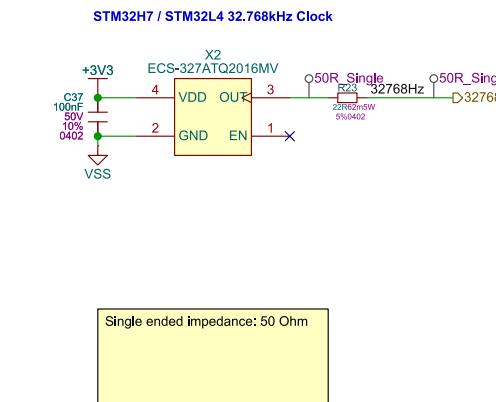
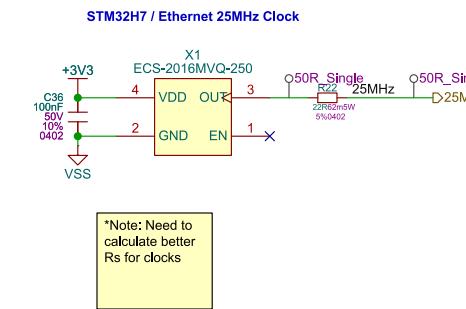
B

C

C

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D



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Status PROTOTYPE

Embry-Riddle Aeronautical University

Title: Awohali - Clocks



Size: B	Sheet: /Clocks/	Revision: 1
Date: 2025-05-13	Sheet 4 of 16	
File: clocks.kicad_sch	Drawn By: Madison Gleydura	

A

A

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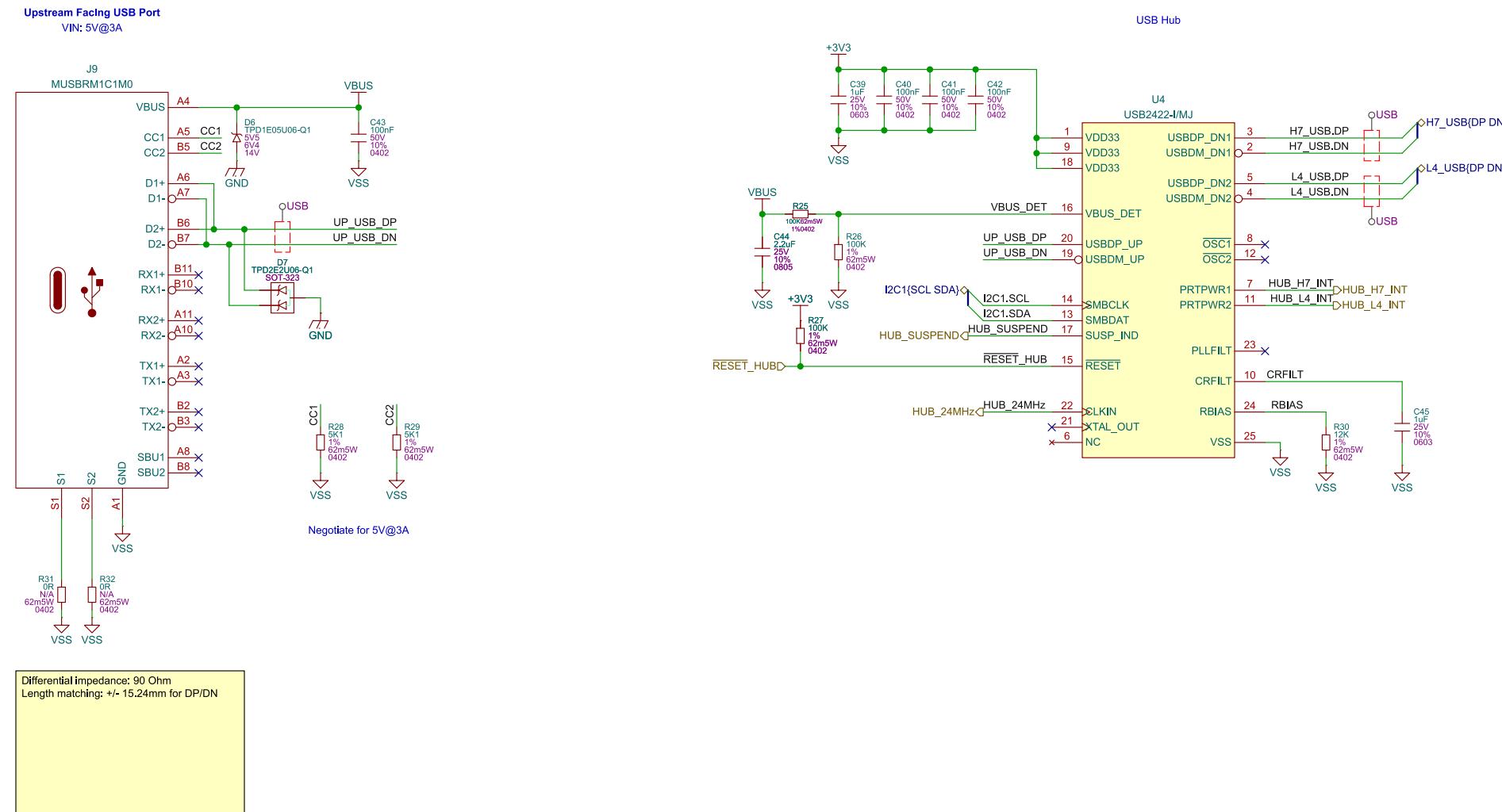
B

C

C

D

D



TP11 → H7_USB.DP
TP12 → H7_USB.DN
TP13 → L4_USB.DP
TP14 → L4_USB.DN

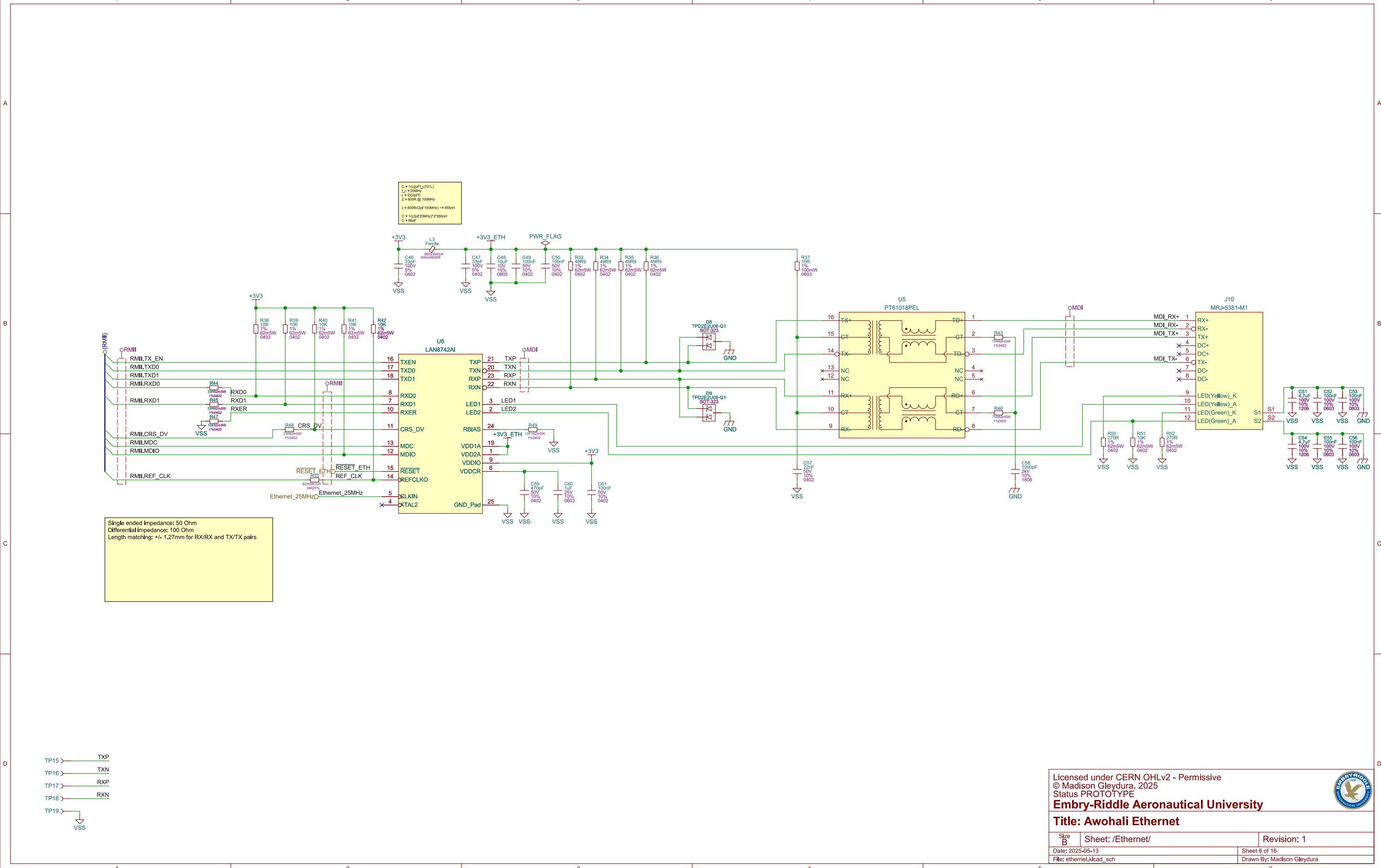
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Status PROTOTYPE

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Title: Awohali USB Hub

Size: B	Sheet: /USB Hub/	Revision: 1
Date: 2025-05-13	Sheet 5 of 16	
File: usb_hub.kicad_sch	Drawn By: Madison Gleydura	





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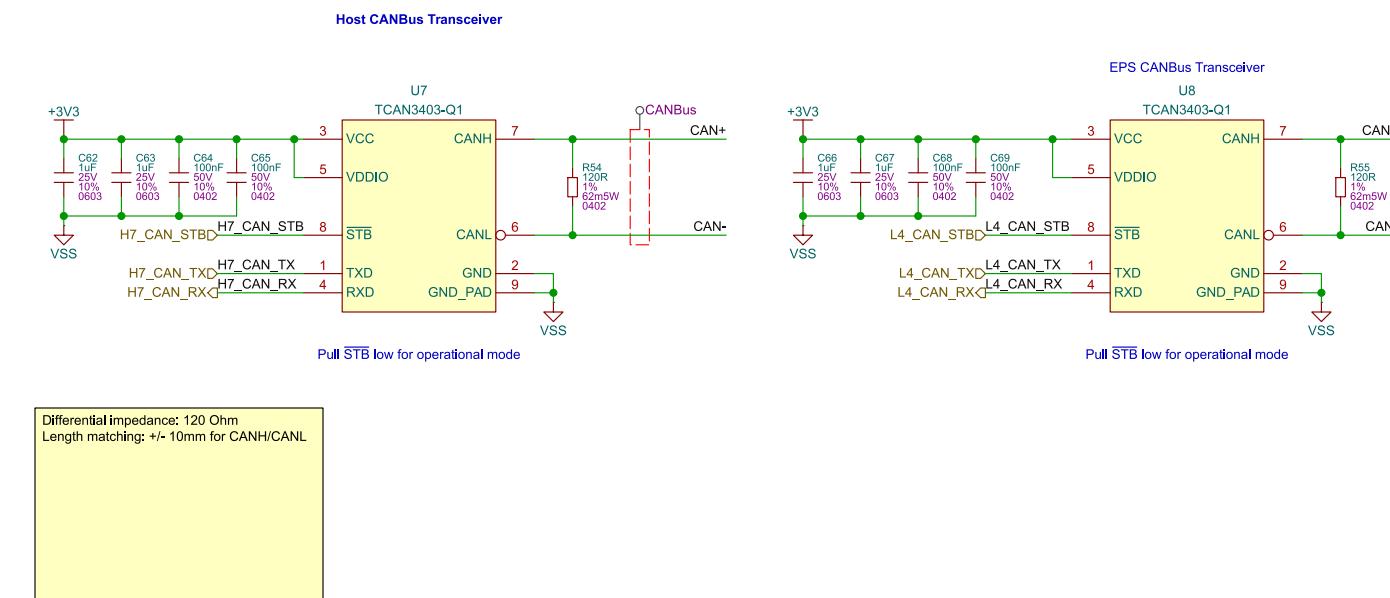
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C

D

D



TP20 → H7_CAN_TX
TP21 → H7_CAN_RX
TP22 → CAN+
TP23 → CAN-
TP24 → L4_CAN_TX
TP25 → L4_CAN_RX
TP26 → VSS
TP27 → VSS

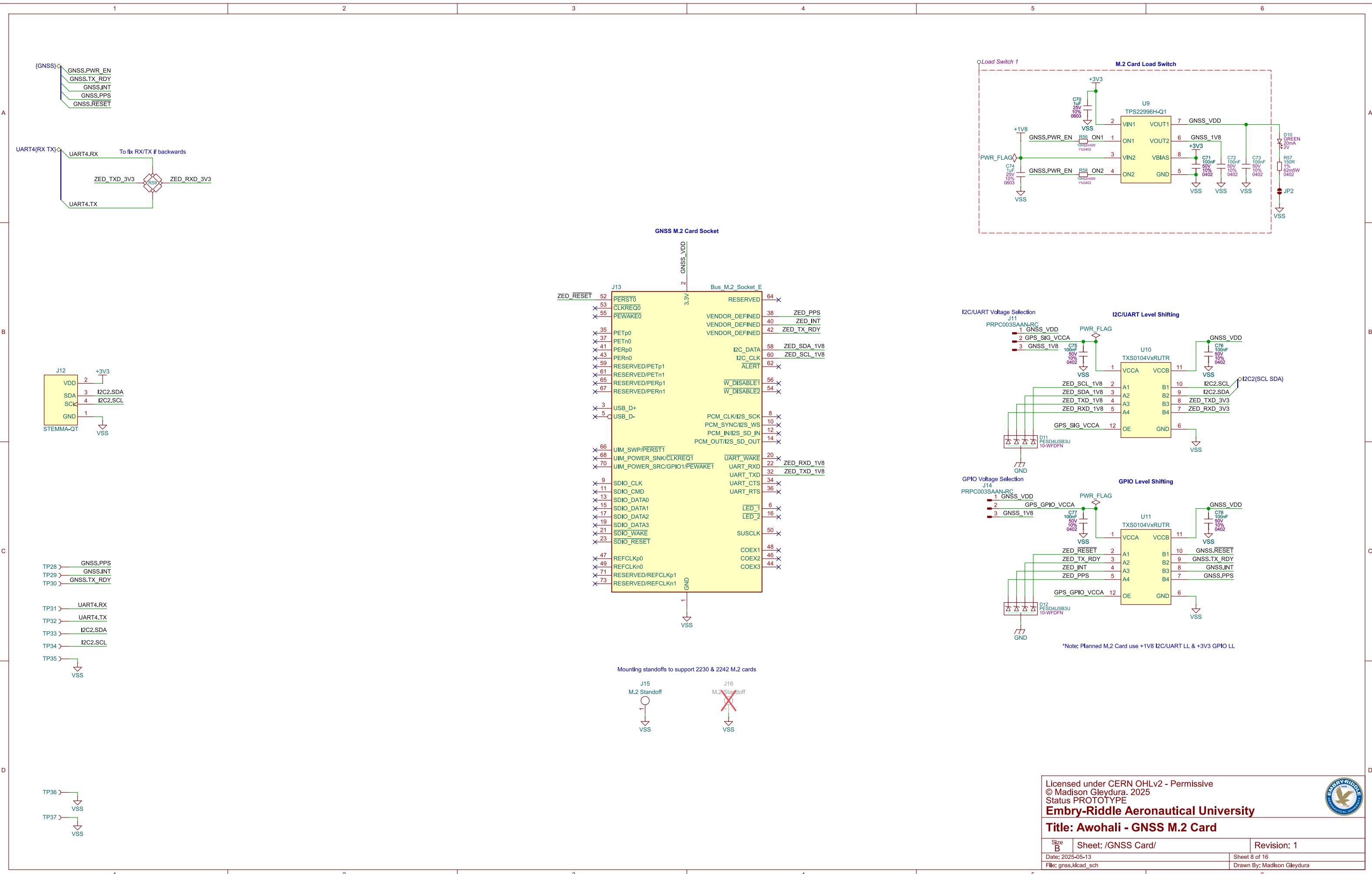
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Status PROTOTYPE

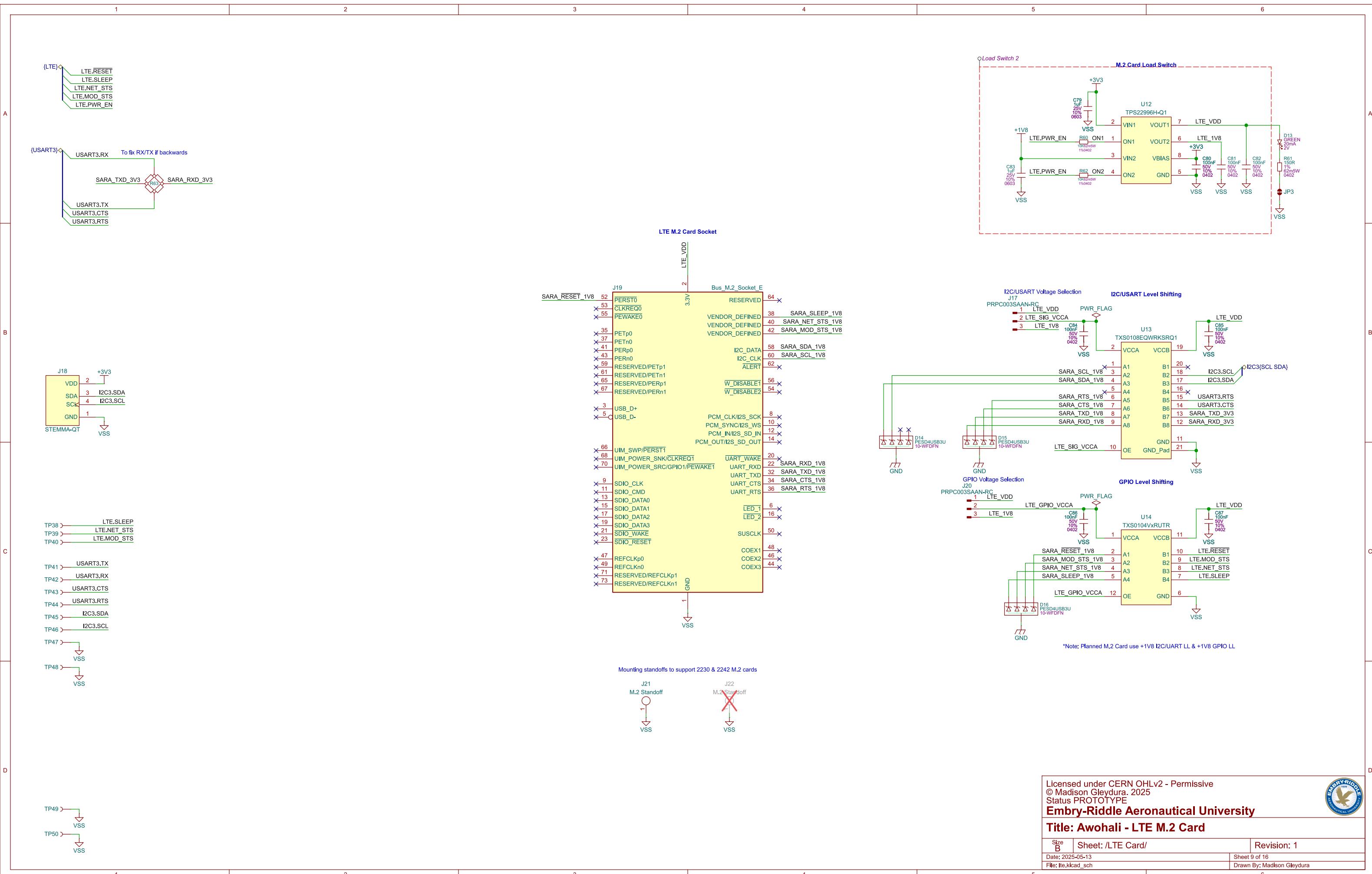
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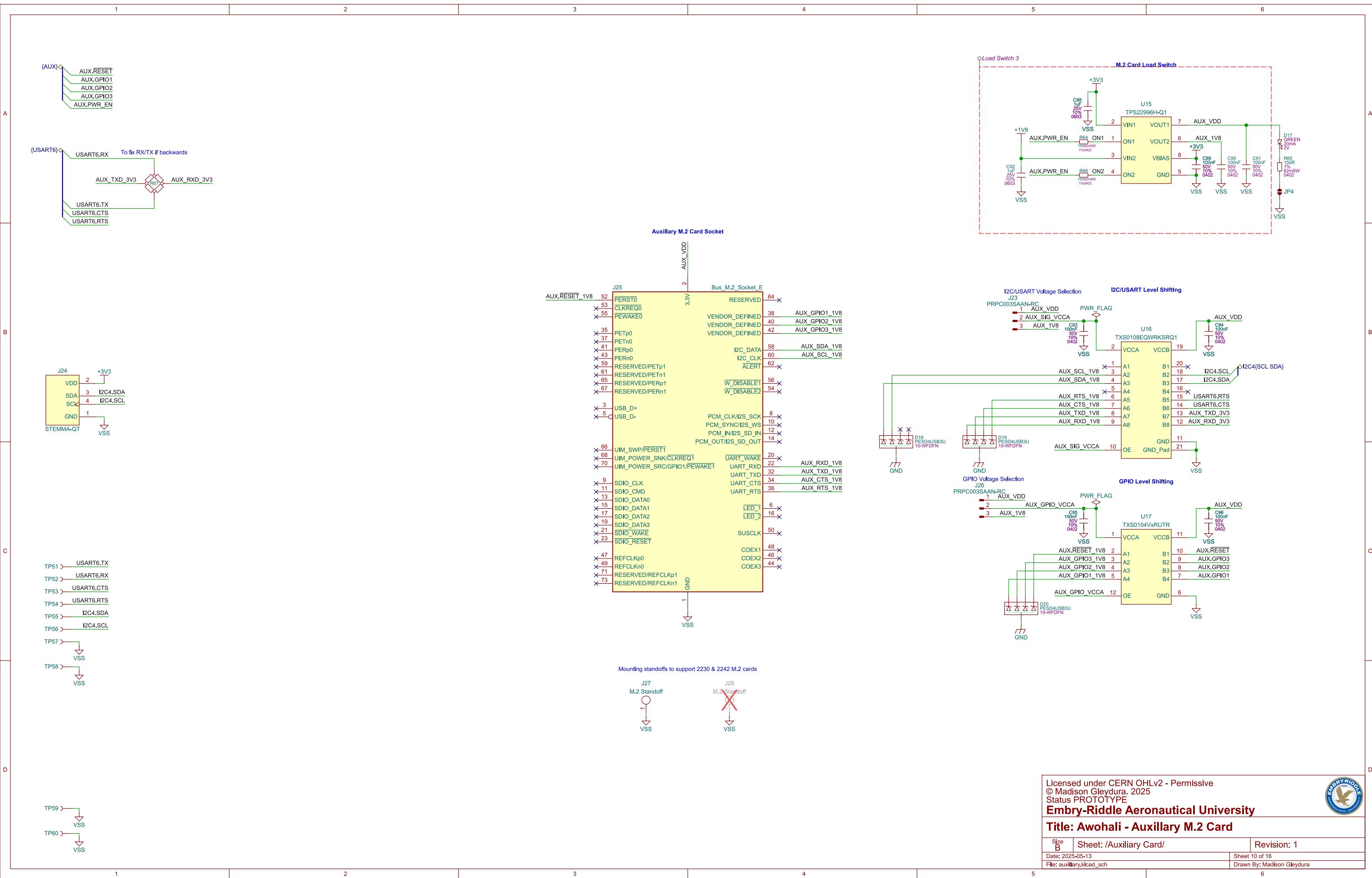
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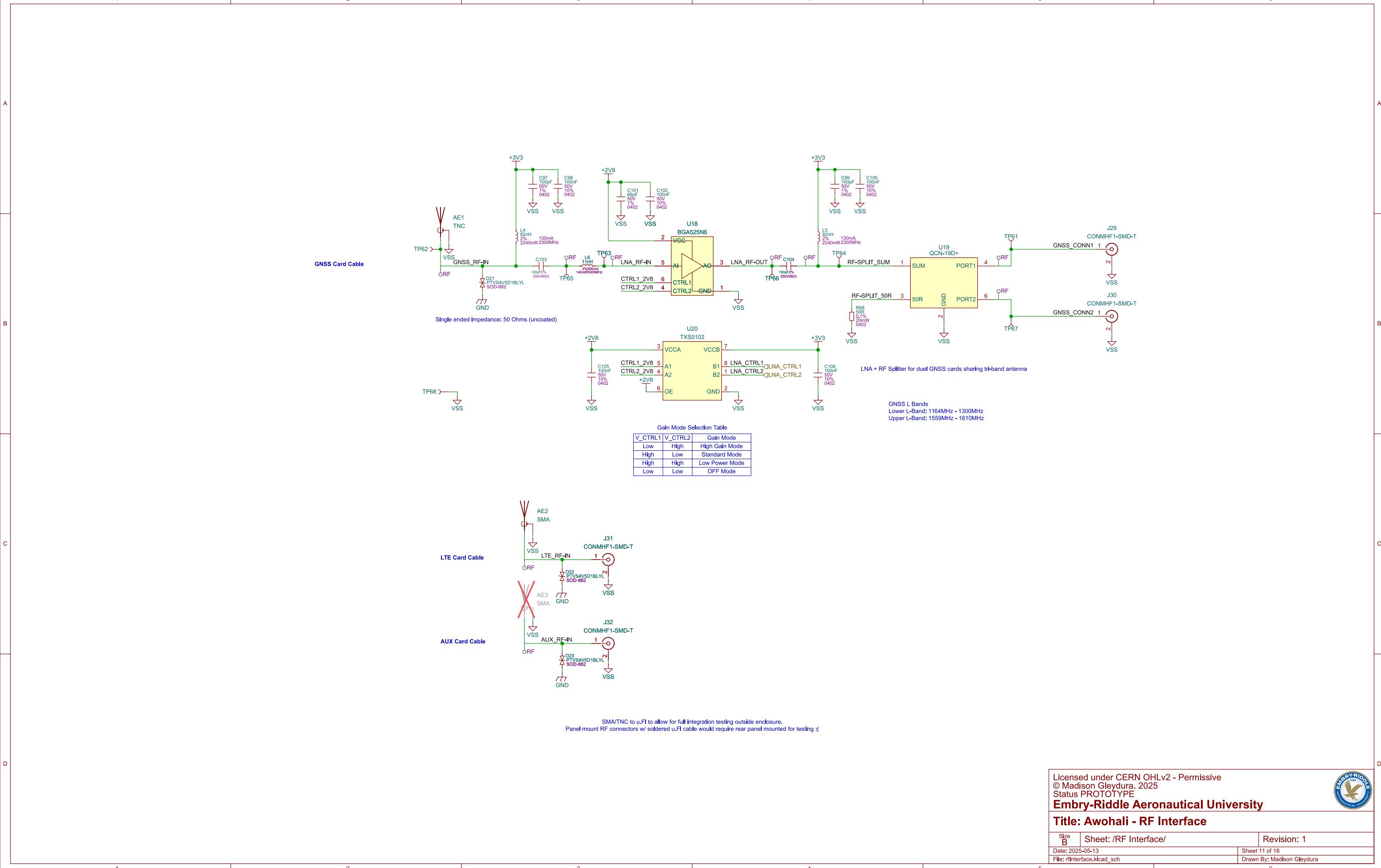


Size B	Sheet: /CANBus Transceivers/	Revision: 1
Date: 2025-05-13	Sheet 7 of 16	
File: canTransceivers.kicad_sch	Drawn By: Madison Gleydura	









A

A

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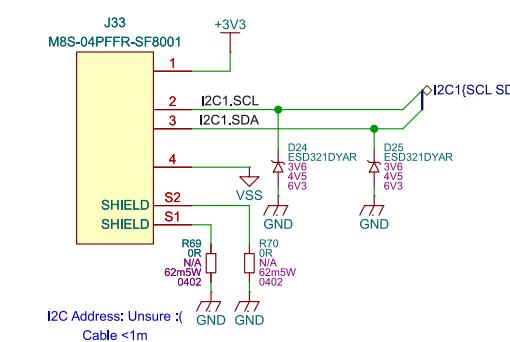
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C

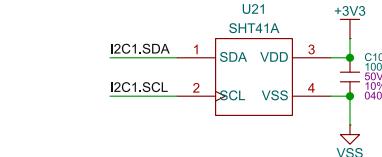
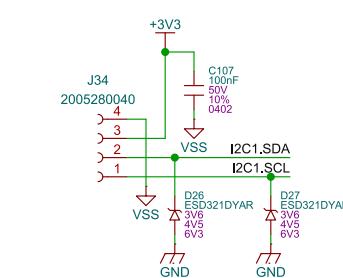
D

D

External Temperature/Humidity Sensor



Internal Pressure Sensor w/ port



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 Status PROTOTYPE

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Title: Awohali - Environmental Sensors



Size	Sheet:	Revision:
B	/Environmental Sensors/	1
Date: 2025-05-13	Sheet 12 of 16	
File: sensors.kicad_sch	Drawn By: Madison Gleydura	

